Reply to Office Action dated March 30, 2004

Amendments to the Claims:

Please amend claims 1, 2, and 17-19 as indicated in the Listing of Claims below.

Listing of Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1 (currently amended): An axial shaft seal disposed between a housing wall and a rotating shaft, the axial shaft seal comprising:

an outer ring insertable into the housing wall in a stationary and sealing manner, the outer ring including a sleeve including a polymer material and having a curved bellows form providing a spring, the curved bellows form extending radially inward over its entire length and having a spring bellows form, a radially inward end portion of the sleeve having a first sealing surface; and

an inner ring connectable to the shaft in a non-twisting and sealing manner and including a ring flange extending radially outward so as to provide a second sealing surface for axially mating the first sealing face, wherein the spring urges the first sealing surface against the second sealing surface.

Claim 2 (currently amended): The axial shaft seal as recited in claim 1, wherein the inward end portion of the sleeve includes a circumscribing ring extending in a radial direction.

Claim 3 (original): The axial shaft seal as recited in claim 1, wherein the inward end portion deviates from a radial normal direction by up to max. 30°, when not axially mating the second sealing surface.

Claim 4 (original): The axial shaft seal as recited in claim 2, wherein the circumscribing ring includes one or more sealing surfaces.

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Claim 5 (original): The axial shaft seal as recited in claim 1, wherein the first sealing surface includes lubricant-recirculating grooves.

Claim 6 (original): The axial shaft seal as recited in claim 1, wherein the first sealing surface includes a friction-reducing coating.

Claim 7 (original): The axial shaft seal as recited in claim 6, wherein the coating includes PTFE.

Claim 8 (original): The axial shaft seal as recited in claim 1, wherein the sleeve includes a folded bellows.

Claim 9 (original): The axial shaft seal as recited in claim 8, wherein the bellows open toward a lubricant side of the seal.

Claim 10 (original): The axial shaft seal as recited in claim 1, wherein the outer ring includes a reinforcement member.

Claim 11 (original): The axial shaft seal as recited in claim 2, wherein the circumscribing ring includes a reinforcing plate.

Claim 12 (original): The axial shaft seal as recited in claim 1, wherein the ring flange includes lubricant-recirculating grooves.

Claim 13 (original): The axial shaft seal as recited in claim 1, wherein the inner ring is made of metal.

Claim 14 (original): The axial shaft seal as recited in claim 1, wherein the inner ring is at least partially sheathed with a polymer material.

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Claim 15 (original): The axial shaft seal as recited in claim 1, wherein the inner ring includes a plurality of projections extending radially inward for providing an axial stop with a shoulder of the shaft.

Claim 16 (original): The axial shaft seal as recited in claim 1, wherein the inner ring includes a circumscribing flange for providing an axial stop with a shoulder of the shaft.

Claim 17 (currently amended): An The axial shaft seal as recited in claim 1, disposed between a housing wall and a rotating shaft, the axial shaft seal comprising:

an outer ring insertable into the housing wall in a stationary and sealing manner, the outer ring including a sleeve including a polymer material extending radially inward and having a spring bellows form, a radially inward end portion of the sleeve having a first sealing surface;

an inner ring connectable to the shaft in a non-twisting and sealing manner and including a ring flange extending radially outward so as to provide a second sealing surface for axially mating the first sealing face, wherein the ring flange includes a radial extension having an outer portion; and further comprising

a sensor disposed at the housing wall and one of a transmitter wheel and a multi-pole wheel cooperating with the sensor to measure at least one of a rotational speed and shaft displacement.

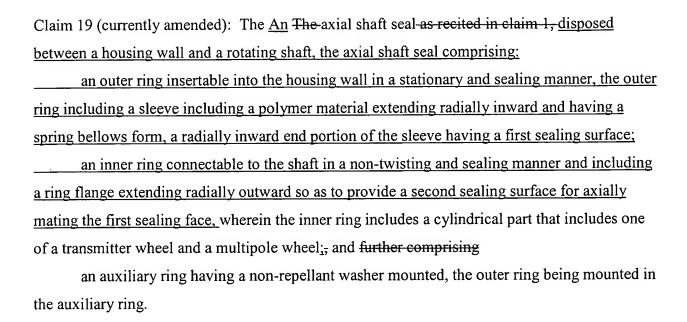
Claim 18 (currently amended): The An The-axial shaft seal as recited in claim 1, disposed between a housing wall and a rotating shaft, the axial shaft seal comprising:

an outer ring insertable into the housing wall in a stationary and sealing manner, the outer ring including a sleeve including a polymer material extending radially inward and having a spring bellows form, a radially inward end portion of the sleeve having a first sealing surface;

an inner ring connectable to the shaft in a non-twisting and sealing manner and including a ring flange extending radially outward so as to provide a second sealing surface for axially mating the first sealing face, wherein the inner ring includes a cylindrical part; and further comprising

an auxiliary flange disposed on the housing wall, a sensor disposed on the auxiliary flange and one of a transmitter wheel and a multipole wheel for cooperating with the sensor.

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Claim 20 (original): The axial shaft as recited in claim 19, wherein the washer is made of a non-woven material.